EXOR® *Tech-note*

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Connecting UniOP Lenze LECOM A/B Controllers

This Technical Note contains the information needed to connect via serial communication UniOP to Lenze controllers based on the LECOM A/B protocol.

The Lenze LECOM A/B communication driver is associated to the Designer file D32UPLC199.DLL. Make sure that this DLL is placed in Designer installation directory together with the file D32uplc199.INI.

Contents

1. Introduction

To create a Designer project for communication with controller based on CoDeSys, select the driver "Lenze LECOM A/B" from the list of available communication drivers in the Configure Controller dialog box.

Note: In case the Lenze LECOM A/B is not shown in the list, make sure that files D32UPLC199.DLL and D32uplc199.INI are present in the Designer folder and then press the Refresh button.

UniOP communication driver uses the so-called "Extended Addressing".
The communication protocol complies with the Lenze specification included in the Lenze document EDB2102UB, 00417816, V1.0, dated October 2000.

2. Data structures

The INI file contains the definition of the parameters for Lenze controllers. Depending on the configuration of a specific controller, the user can edit this file following the instructions present in the file header.
Designer user interface will show all parameters available to a programmer for use in a project file.

The INI file is divided into several sections.

The section Protocol Parameter contains the model string displayed by Designer in the Controller Setup. The INI file can contain the description of one or more models; for each of them the following sections describe the available parameter set.

```
[ProtocolParameters1]
ModelString       = 9300
```

The ParameterInfoN section contains the relevant information for the model N.
The first entry in the line must be the identification string for the parameter followed by an equal sign. The string cannot be longer than 40 characters. After the equal sign, the parameter is specified as following:

1	Read/Write Support	0 = read only
		1 = read/write
		2 = write only
2	Parameter Type	1 = Boolean
		2 = Signed Char
		3 = Signed Short
		4 = Signed Long
		5 = Unsigned Char (decimal)
		6 = Unsigned Short (decimal)
		7 = Unsigned Long (decimal)
		8 = Float
		9 = String

105 = Unsigned Char (hexadecimal)
106 = Unsigned Short (hexadecimal)
107 = Unsigned Long (hexadecimal)

The highest allowed Parameter Number is 9999.
The characters '[', ']' '=' and ',' cannot be used as part of the Parameter String.
The Parameter Strings must be less than 40 characters long.

The following is an example of the ParameterInfo section for Node 1.

```
[ParameterInfo1]
C0002   =   1,  7
C0003   =   1,  7
C0004   =   1,  7
```

3. Communication Parameter Setting

Communication parameters for serial communication can be adjusted by clicking the "PLC Comm..." button in the "Controller Setup" dialog box.
The default communication parameters are defined as follows:

	Default value
Speed	19200 baud
Start bits	1
Data	7
Parity	Even
Stop bits	1

Communication is supported for both RS-232 and RS-485. Please follow the drive manufacturer suggestions concerning the wiring of the communication cable.

Appendix A. Communication Error Codes

Current communication status is displayed on the system page of the UniOP. Beside the string, describing current state of the communication (OFF, ON, ERR), there is an additional error code representing the last (which may be not the current one) error encountered. The codes are:

Code	Description	Notes
00	No error	There are no communication errors and there have been no errors since start-up.
04	Negative ACK	Write operation failed due to the NAK returned by the controller.
05	Time out (receiving)	No response received form the controller within the timeout period.
06	Response error	Wrong checksum in response telegram, or buffer overrun.
07	General communication error	General un-known communication error.
10	Negative ACK or unrecognized request.	During read operation PLC returned an error condition.
11	Line error	Wrong bad baud rate, parity, etc.